Implementation of the New Methodology for Systems Modernization Needs Increased Focus and Support

November 2000

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INSPECTOR GENERAL
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MEMORANDUM FOR COMMISSIONER ROSSOTTI

FROM: Pamela J. Gardiner
Deputy Inspector General for Audit

SUBJECT: Final Audit Report – Implementation of the New Methodology for Systems Modernization Needs Increased Focus and Support

This report presents the results of our review of the Internal Revenue Service's (IRS) efforts to develop and implement its Enterprise Life Cycle (ELC). Our objective was to assess the IRS' processes for development and implementation of the ELC for the Business Systems Modernization Program.

In summary, we found that although the IRS is making progress in its deployment efforts, additional focus and support is needed to avoid further delays in fully implementing its systems modernization methodology. Delays in implementing the ELC thus far have impacted systems modernization projects that are currently underway.

We recommended that the IRS provide additional focus and support to the ELC Deployment Team, develop a validation process for the PRIME contractor's ELC deliverables, implement improvements to the ELC library, and expedite development and delivery of ELC guidance and training. In addition, we recommended that the IRS require the PRIME contractor to perform a training needs-assessment for the projects and a staffing analysis, in addition to increasing the staffing in its training group.

Management's response was due on October 26, 2000. As of October 30, 2000, management had not responded to the draft report.

Copies of this report are also being sent to the IRS managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions, or your staff may call Scott Wilson, Associate Inspector General for Audit (Information Systems Programs) at (202) 622-8510.

**Implementation of the New Methodology for Systems
Modernization Needs Increased Focus and Support**

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Executive Summary

The Internal Revenue Service (IRS) is revamping business processes and implementing new technology, as part of its comprehensive modernization program. To assist in managing the modernization efforts for information systems, the IRS hired a contractor in December 1998. The contractor, along with the IRS, is modifying its existing business change methodology to meet the specific needs of the IRS. The modified methodology is known as the Enterprise Life Cycle (ELC). The ELC incorporates aspects of realizing a new business vision, from strategy development through system deployment and operations. The goal is to create IRS technology systems that improve taxpayer service, add new security features, and carry the agency into the new century.

The IRS has established a program management office, the Business Systems Modernization Office (BSMO), to oversee the modernization effort. Individuals within this office are responsible for the implementation of the ELC methodology. The objective of this audit was to assess the IRS' processes for development and implementation of the ELC for the Business Systems Modernization Program.

Results

The IRS is making progress in implementing ELC processes and procedures required for effective management of the Business Systems Modernization Program. The BSMO "stood up," or was officially recognized, on July 13, 2000. Roles and responsibilities for the BSMO staff have been defined, and the IRS is in the process of ensuring these roles are effectively communicated and appropriate training is conducted.

However, documentation prepared by the PRIME contractor[1] and accepted by the IRS indicates that completion targets for certain key ELC activities have been delayed beyond their initial deadline of September 2000, the implementation date indicated in the IRS' latest Congressional funding request.

Increased Focus on Completing Interim Tasks Is Needed to Ensure Further Enterprise Life Cycle Implementation Delays Do Not Occur

The IRS initially received $9 million in 2 increments to complete initial ELC deployment by October 31, 1999. The IRS later revised plans to deploy the first phase of the ELC

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[1] In December 1998, the IRS selected the Computer Sciences Corporation (CSC) to serve as the Prime Systems Integration Services Contractor (PRIME) for the Business Systems Modernization Program.

and presented in its spending plan to the Congress that it would complete ELC deployment by September 30, 2000. The IRS received an additional $5.1 million to complete the ELC implementation as a result of the approval of the latest spending plan.

Although the IRS has made progress in implementing the ELC and deployment activities have started, target dates for completion of several key deployment activities, such as delivery of educational courses and implementation of strategies to communicate ELC processes, have been delayed beyond September 30, 2000. Completion of the initial training and communications initiatives is critical to ensure that the BSMO effectively manages and oversees the modernization effort. Delays in the implementation activities have resulted in delays in the progress of modernization projects and could result in additional delays, as well as lack of quality in project deliverables. In addition, implementation delays beyond target dates could cause the Congress to question future commitments the IRS makes regarding its implementation plans.

The Current Version of the Enterprise Life Cycle Lacks Key Components Needed by the Project Developers

The IRS has not completed the development of key components of the ELC. Procedures for Investment Decision Management, a key legislative requirement for government agencies, had not been fully incorporated into the ELC.[2] In addition, key supplements to the ELC, such as the Enterprise Architecture, Security and Privacy, and Legacy Systems Transformation, have not been finalized.

The IRS and the PRIME contractor have established an automated library to store approved polices, procedures, and other guidance for using the ELC. Although this is a worthwhile endeavor, the library currently lacks the level of detail necessary to deploy the ELC. A sample of the library's users reported that they need more training on using the ELC and the associated library, more examples of completed work products, and better linkages and a centralized index in the automated library.

Because the ELC is a dynamic, evolving methodology, it is imperative that accurate, timely guidance be provided to project personnel. Inadequate ELC guidance, thus far, has resulted in inconsistency, inefficiency, and frustration in the preparation of project deliverables.

Enterprise Life Cycle Training Has Not Been Provided in a Timely Manner

At the time of our review, the overall Education and Development Plan for BSMO had been prepared, but individual training and lesson plans were not developed. One reason training efforts are not further along is because they were dependent on identification and

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[2] The Clinger-Cohen Act of 1996, Public Law 104-106, February 10, 1996.

definition of roles and responsibilities as well as an analysis of current skills. This identification and definition was not finalized until late June 2000.

Timely training for IRS and contractor employees working on the modernization projects is also at risk. At the time of our review, a formal needs-assessment for project training had not been conducted, and only 25 percent of the PRIME contractor staff in 2 of the IRS' critical projects attended the initial ELC course. Many of the untrained contractor staff were employees from firms that were sub-contractors to the CSC and, thus, they had less experience using the ELC methodology.

The PRIME Program Training Group is currently staffed with only three people, including one part-time instructor. This staffing level will be insufficient to modify and deliver the 41 courses that have been identified as necessary for the modernization project personnel.

Training plays an integral part in the deployment of ELC processes and procedures. Without adequate training, the IRS can expect continued delays in project development and an overall lack of quality control over the modernization effort.

Summary of Recommendations

We recommend that the IRS' Chief Information Officer (CIO) provide additional focus and support to the ELC Deployment Team, develop a validation process for the PRIME contractor's ELC deliverables, implement improvements to the ELC library, and expedite development and delivery of ELC guidance and training. In addition, we recommend that the CIO require the PRIME contractor to perform a training needs-assessment for the projects and a staffing analysis, in addition to increasing the staffing in its training group.

Management's Response: Management's response was due on October 26, 2000. As of October 30, 2000, management had not responded to the draft report.

Objective and Scope

Our objective was to assess the IRS' processes for development and implementation of the ELC for the Business Systems Modernization Program.

Our audit objective was to assess the Internal Revenue Service's (IRS) processes for development and implementation of the Enterprise Life Cycle (ELC) for the Business Systems Modernization Program. To accomplish this objective, we evaluated the processes for developing the ELC to ensure that it is current, complete, and in a usable format and structure. We also evaluated processes established to deploy, or implement, the ELC in the IRS' program management office and with the IRS' key stakeholders. The scope of the audit included discussing the status of the ELC Deployment Program with key IRS and PRIME Alliance[1] officials and reviewing available documentation.

This audit was conducted in the Business Systems Modernization Office (BSMO) in New Carrollton, Maryland, and at the Computer Sciences Corporation (CSC) in Landover, Maryland. We performed this review from January to June 2000, in accordance with *Government Auditing Standards*.

Details of our audit objective, scope, and methodology are presented in Appendix I. Major contributors to this report are listed in Appendix II.

Background

The IRS has been attempting to modernize its outdated tax processing system for more than a decade. After 10 years and over $3 billion spent with minimal improvement and intense scrutiny from the Congress,

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[1] In December 1998, the IRS selected the Computer Sciences Corporation to serve as the Prime Systems Integration Services Contractor (PRIME) for the Business Systems Modernization Program.

the IRS decided to use a contractor to help develop modernized systems.

In December 1998, the IRS selected the CSC to serve as the PRIME contractor for the Business Systems Modernization Program over the next 15 years. The first priority of the PRIME was to implement a systems life cycle environment patterned after the CSC's Catalyst[2] methodology. This approach incorporates aspects of realizing a new business vision, from strategy development through system deployment and operations. The goal is to create IRS technology systems that improve taxpayer service, add new security features, and carry the agency into the new century.

The ELC is a methodology for initiating, designing, implementing, coordinating, and managing IRS business change.

The IRS adopted Catalyst and expanded its scope to form an IRS-specific methodology known as the ELC. The ELC provides a process for initiating, designing, implementing, coordinating, and managing business change. The ELC establishes a set of repeatable processes and a system of reviews, checkpoints, and milestones that reduce the risks of a system development program and ensure alignment with the IRS' overall business strategy.

The ELC is intended to be an integral part of the IRS' business and information systems modernization efforts. All IRS and PRIME contractor personnel involved in the modernization will use the ELC to improve the acquisition, use, and management of information technology within the IRS; facilitate management of large-scale business change; and enhance the methods of decision-making and information sharing.

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[2] The Catalyst is a service mark of the CSC. It refers to the CSC's fundamental business change methodology, which is based on a collection of best practices.

*An ELC Deployment Team
was established to roll out the
required ELC processes and
procedures.*

The IRS has established an ELC Deployment Team[3] to roll out the required ELC processes and procedures necessary for the BSMO to execute the degree of program management and control required by the Clinger-Cohen Act.[4] According to the Act, the IRS must identify and adopt best practices for information technology management, including commercial-sector practices.

The ELC Deployment Plan begins by mapping and validating the tasks, roles, and interfaces of BSMO personnel and key stakeholders. The Plan continues by mapping and validating ELC processes and procedures to those tasks, roles, and interfaces. This process assessment is designed to ensure that BSMO roles and responsibilities align with ELC processes and procedures.

Results

The IRS is making progress in implementing ELC processes and procedures required for effective management of the Business Systems Modernization Program. The IRS reached a key milestone in initiating deployment of the ELC at the program level on June 30, 2000, when the PRIME contractor delivered the Business Systems Modernization Organizational Change Framework, Organizational Transition Plan. The Plan describes the organizational transition that the BSMO must use to achieve business goals in support of the Business Systems Modernization Program.

In addition, the BSMO "stood up," or was officially recognized, on July 13, 2000. Roles and responsibilities for the BSMO staff have been defined, and the IRS is in

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[3] The ELC Deployment Team is a joint team composed of IRS and PRIME contractor personnel.
[4] Public Law 104-106, February 10, 1996.

the process of ensuring these roles are effectively communicated and appropriate training is conducted.

When deployment is complete, the ELC will address items reported by the General Accounting Office[5] as missing from the IRS Systems Life Cycle, including how work processes will be reengineered, how business requirements will be specified, and how business cases for technology investments will be formulated and evaluated.

However, documentation prepared by the PRIME contractor and accepted by the IRS indicates that completion targets for certain key ELC activities have been delayed beyond their initial deadline of September 2000, the implementation date indicated in the IRS' latest Congressional funding request. Our review of the IRS' processes for developing and implementing the ELC identified that:

- Increased focus on completing interim tasks is needed to ensure further ELC implementation delays do not occur.

- The current version of the ELC lacks key components needed by the project developers.

- ELC training has not been provided in a timely manner.

Further delays in implementing ELC processes and providing training to program and project employees will likely result in additional delays in completing modernization projects as well as lower quality in the deliverables provided by the projects.

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[5] *Tax Systems Modernization: Blueprint Is a Good Start But Not Yet Sufficiently Complete to Build or Acquire Systems* (Reference Number GAO/AIMD/GGD-98-54, dated February 1998).

Increased Focus on Completing Interim Tasks Is Needed to Ensure Further Enterprise Life Cycle Implementation Delays Do Not Occur

The IRS has requested over $14 million in 3 funding requests for development and implementation of the ELC.

The IRS initially received $9 million for the implementation and deployment of the ELC in 2 separate funding measures[6] and originally scheduled to deploy the ELC by October 31, 1999. On April 18, 2000, a third funding request of $5.1 million was approved for ELC enhancements, maintenance, and full deployment. The target date for completion of ELC implementation in the most recent spending plan provided to the Congress was September 30, 2000.

However, even with this increased emphasis and additional funding, we believe that deployment of the ELC will not be completed by the September 30, 2000, implementation date. We have these concerns because the IRS and the CSC have not yet developed the organizational vision, strategies, and objectives for the BSMO. In addition, documentation prepared by the PRIME contractor and accepted by the IRS indicated that critical deployment activities, such as the delivery of ELC education to program management employees and the implementation of strategies to communicate ELC processes, are not scheduled for completion until December 2000.

The timely completion of these initiatives is critical because the success or failure of systems modernization projects is dependent on the ability of the BSMO to manage and oversee the modernization effort.

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[6] Business Systems Modernization efforts are funded through the Information Technology Investment Account and other IRS appropriations.

A primary cause of delays in deploying the ELC has been the instability of the program management office.

There are several causes for the delays in deploying the ELC. First, and most critical, has been the instability of the BSMO. Numerous changes in organizational structure occurred in late 1999 and early 2000. Also, several high-level management personnel in the modernization office have either left the IRS or have moved to other positions. An organizational structure was officially approved, and the BSMO "stood up" and was formally recognized on July 13, 2000.

This climate of instability has resulted in delays in establishing the roles and responsibilities of modernization personnel and in implementing the ELC. Another Treasury Inspector General for Tax Administration (TIGTA) report[7] detailed this issue and made recommendations to improve the program management of the modernization effort.

Second, individuals responsible for deploying the ELC have been assigned concurrent responsibilities in other program activities. The staff assigned to the ELC Deployment Team is limited, and when their focus has been shifted to other priorities, delays have occurred.

Third, individuals in the BSMO have not been fully trained in deploying the ELC. The ELC is a complex methodology to incorporate, and training is a key element to enable effective deployment. Training is part of the deployment plan but is not scheduled to be completed until December 2000. This report details the delays in providing BSMO personnel ELC training in a later section.

Delays in deploying the ELC have contributed to weak or non-existent quality reviews of two of the IRS' critical systems modernization projects, e-Services and

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[7] *Significant Risks Need to Be Addressed to Ensure Adequate Oversight of the Systems Modernization Effort* (Reference Number 2000-20-099, dated June 2000).

Customer Communications.[8] Consequently, incomplete
or inadequate work products have been delivered, and
delays have been experienced in delivering systems that
will improve customer service to taxpayers.

Reviews by the BSMO are critical tools required by the
ELC to ensure products meet ELC requirements. For
example, milestone reviews on three of the IRS' critical
projects were not conducted until they were approaching
the third milestone. This review identified that over
40 percent of the work products were either missing or
were still in the planning stages and other products were
incomplete.

Further delays in implementing the ELC methodology
beyond target due dates could cause the Congress to
further limit the IRS' funding and to question future
commitments the IRS makes regarding its
implementation plans.

*The IRS has placed
intense emphasis on
implementing the ELC.*

The IRS has noted the risk of allowing modernization
projects to continue prior to the deployment of the ELC
and is placing intense emphasis on implementing it. To
mitigate the risk, the IRS is revising PRIME contract
work requests to enable enhanced monitoring and
accountability, implementing additional processes
(i.e., Milestone Readiness Reviews), and
rescoping/ rescheduling certain projects.

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[8] e-Services --The e-Services Project is 1 of several initiatives
designed to help the IRS meet its goal of 80 percent electronic
interactions with taxpayers by 2007. The Project is focusing on
electronic filing, education, and self-help applications and increased
use of secure e-mail to deliver requested information.
Customer Communications --The focus of this Project is to increase
customer service by providing the capability to route taxpayer calls
to any IRS employee in any location. In addition, this Project will
concentrate on improved self-service telephone and Internet
services for taxpayers.

Recommendation

In addition to recommendations made in the TIGTA audit report mentioned earlier, we recommend that the Chief Information Officer (CIO):

1. Increase focus and support to the ELC deployment staff to ensure that interim tasks are completed and approved by scheduled due dates.

Management's Response: Management's response was due on October 26, 2000. As of October 30, 2000, management had not responded to the draft report.

The Current Version of the Enterprise Life Cycle Lacks Key Components Needed By the Project Developers

The IRS has adopted the CSC's Catalyst methodology as a basis for the ELC. Although this methodology is extensive, supplemental materials specific to the IRS' Business Systems Modernization Program have to be developed to address government requirements and user needs. Several of these critical supplemental materials needed for ELC implementation have not been timely prepared. In addition, users need more detailed guidance as well as training, examples, and indexing to make the ELC library more useful.

Critical ELC supplements and procedures have not been timely prepared

Critical ELC guidance has not been timely prepared.

Several key supplements to the ELC, such as the Enterprise Architecture, Security and Privacy, and Legacy Systems Transformation, have not been

finalized.[9] A draft of the Security and Privacy document has been available to projects, but the draft has not gone through the approval process. These three supplements provide critical structure and framework for the projects to follow in designing modernized systems.

Procedures to guide the IRS in the prioritization, approval, funding, monitoring, and evaluation of its investment initiatives were not fully incorporated into the ELC.

At the time of our audit, critical procedures for the Investment Decision Management (IDM) process had not been fully incorporated into the ELC. The IDM process guides the IRS in prioritizing, approving, funding, monitoring, and evaluating investment initiatives. The Clinger-Cohen Act requires agencies to have specific qualitative and quantitative criteria for projects to maximize value. These procedures were completed in late June 2000 and, according to management, would be incorporated into the user library in July 2000.

The PRIME contractor delivered the ELC Guide to the IRS on November 12, 1999. The ELC Guide provides an introduction and overview of the processes, products, reviews, techniques, participants, and interfaces of the ELC. IRS program-specific details are to be included as supplemental materials.

The PRIME contractor did not foresee the implication of excluding these materials until several modernization projects were well underway. As a result, the omission of the Enterprise Architecture supplement contributed to

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[9] Enterprise Architecture Supplement -- provides key work processes and activities that the IRS and the PRIME contractor would follow to develop the Enterprise Architecture for development projects.
Security and Privacy Supplement -- provides a broad overview of how information and security and privacy fit into the ELC and suggests ELC enhancements.
Legacy Systems Transformation Supplement -- provides a systematic approach, including processes and techniques that will support transformation of existing IRS systems.

delays in meeting design and development target dates for the Customer Communications Project.

The ELC user library does not have the level of detail necessary for deployment

The ELC has been deployed to the projects in the form of an automated data repository -- an automated library. This library, called the Process Asset Library, is a navigable web site covering ELC processes with links to the ELC Guide, Catalyst, and additional items, such as procedures, templates, and examples of work products. This library is updated quarterly with new information and examples.

One-half of the work products we sampled did not have examples in the ELC library.

The ELC Process Asset Library, version 2000.2, as implemented in May 2000, lacks the level of detail necessary to fully deploy the ELC. We sampled 36 (20 percent) of the 180 work products in the ELC library. Of the 36 work products, we found that 18 (50 percent) did not have examples or instructions to guide project teams in design and development activities. For example, the product decision model is a work product that did not have an example in the ELC library. This document assists the IRS in the approval of the system concept for a modernization initiative and the authorization of funds for design of that system.

On May 11, 2000, the IRS reported 69 ELC directives, process descriptions, procedures, and templates still needed to be written or modified. These ELC gaps were identified in mid-April, but the ELC Deployment Team had other tasks to address and was not able to complete these deliverables. A quarterly update to the ELC library to incorporate this guidance was scheduled for July 15, 2000.

Users need additional training, examples, and indexing to make the library more useful

To determine whether improvements are needed to make the library more usable, we surveyed a sample of 87 (32 percent) of the 275 IRS employees and PRIME contractor personnel at the project and program levels assigned to IRS modernization projects. Of the 87 surveys issued, we received 46 responses. Suggestions for improvements were focused in three primary areas:

- The need for more training on the ELC, specifically on the use of the library.

- The need for more templates and completed work products to be used as examples.

- The need for better linkages and a more centralized index.

Inadequate ELC guidance has resulted in problems in the preparation of project deliverables.

The ELC is a dynamic and evolving methodology. It is imperative that accurate, complete, and timely information be provided to project personnel. Delays in providing this data result in project deliverables that do not meet ELC requirements. Inadequate ELC guidance, thus far, has resulted in inconsistency, inefficiency, and frustration in the preparation of project deliverables.

Recommendations

We recommend that the CIO:

2. Develop a validation process to ensure that the ELC material provided by the PRIME contractor meets the IRS' needs.

3. Implement improvements to the ELC Process Asset Library web site, such as providing better linkages and a centralized index. The CIO should also ensure that program and project training specifically covers how to use the library.

4. Develop a process for timely development and
   delivery of ELC guidance, including templates and
   examples of work products, to project personnel.

Enterprise Life Cycle Training Has Not Been Provided in a Timely Manner

The PRIME Program Training Group was established in
November 1999 to provide training on ELC processes
and procedures for contractors and IRS employees
working on systems development projects. The ELC
Deployment Team is currently responsible for
identifying ELC training courses for the BSMO and
stakeholders.

ELC training for program management personnel has thus far been limited to overview courses

The BSMO had an overall competency assessment rate of 2.7, versus the target rate of 4.3.

The PRIME contractor performed a competency
assessment for 34 of the 67 (51 percent) employees in
the BSMO. The PRIME contractor identified 234
underlying skills and knowledge components that were
needed to implement program management business
processes. The BSMO had an overall competency
assessment rate (on a scale of 1-5) of 2.7, versus the
target assessment rate of 4.3.

Results of the assessment for the 34 employees were
used to establish a competency baseline and develop the
Education and Development Plan for the entire BSMO.
The training needs identified in the Plan allow for
program level oversight, as required by the ELC.

One reason that training efforts are not further along is
because they were dependent on the identification and
definition of roles and responsibilities as well as an
analysis of current skills. This identification and
definition was not finalized until late June 2000.

*ELC training for BSMO
personnel has been limited to
general courses.*

Although roles and responsibilities of the BSMO have
been defined, BSMO employees and stakeholders have
not had training for their specific duties. This staff has
been offered only two general ELC training courses thus
far: *The ELC Overview* and *The ELC in Action*. In
addition, the IRS has not prepared individual training
and lesson plans to execute specific roles and
responsibilities.

According to plans prepared by the PRIME contractor
and approved by IRS management, the delivery of this
role-based training and coaching is not scheduled for
completion until December 2000. Until this training is
completed, the ability of the employees in the BSMO to
effectively carry out current quality review and
monitoring of assignments in accordance with the ELC
will be limited. As a result, the timeliness and quality of
project delivery could suffer.

Contractor personnel developing modernized systems have not had adequate training on using ELC processes and procedures

The deployment strategy for the PRIME contract project
training involves a just-in-time training approach. As
the IRS' modernization projects enter into the different
phases of the ELC, training for that phase is deployed at
the beginning of the project phase.

*A formal needs-assessment
has not yet been conducted to
determine the training needs
of project personnel.*

A needs-assessment is used to target specific skill areas
in need of development; it defines expected performance
results. Part of this assessment includes a gap analysis
to assess where performance is currently, versus where it
needs to be in the future. At the time of our audit, a
formal training needs-assessment had not been
performed for the project participants.

Only 25 percent of the PRIME contractor personnel in the Customer Communications and e-Services Projects attended The ELC Overview course.

The ELC Overview is the first course in the education series for employees learning Catalyst and the ELC. In reviewing training records, we found that only 16 of the 63 (25 percent) PRIME contractor personnel in the Customer Communications Project, and 3 of the 13 (23 percent) PRIME contractor personnel in the e-Services Project, had attended *The ELC Overview* course. Of the 57 employees who had not taken the training class, 45 (79 percent) were employees of sub-contracting firms and not employees of the CSC; thus, they had limited, if any, prior exposure to the Catalyst methodology. Training of these employees is critical to ensure that the IRS receives adequate guidance in developing projects.

The PRIME Program Training Group is currently staffed with only three people, including one part-time instructor. These limited training resources contributed to the absence of a training needs-assessment for both PRIME contractor personnel and IRS employees assigned to modernization projects. Without additional instructors, the Training Group will have difficulty with just-in-time delivery of the 41 Catalyst courses identified as necessary for training the modernization project employees.

Many project managers do not have Catalyst or ELC methodology experience.

IRS employees working with the contractor to develop modernized systems have expressed concern that although PRIME contractor personnel are experienced professionals, many do not have the necessary knowledge or experience in using the ELC. Training plays an integral part in the deployment of the ELC processes and procedures. Providing the necessary ELC training to managers and employees will equip them with the knowledge and skills required to carry out their tasks. Without adequate training, the IRS can expect to experience continued delays in development of key customer service projects and inconsistency in the level of quality of the systems that are developed.

Recommendations

We recommend that the CIO:

5. Conduct competency assessments for all remaining BSMO employees and PRIME contractor personnel assigned to IRS modernization projects to identify training needs.

6. Ensure that the PRIME Program Training Group performs a staffing analysis and increases its staff as necessary to effectively develop and deliver ELC training.

7. Expedite the development and delivery of ELC role-based training for BSMO personnel and key stakeholders.

Conclusion

Thus far, the IRS has received $14.1 million from the Congress for development and implementation of the ELC. The IRS has experienced problems in building the program management capability required to deploy the ELC. Modernization project development has struggled in its early efforts due, in part, to a lack of ELC training and guidance.

Although progress in deploying the ELC is being made, additional focus and support is needed to ensure that the ELC Deployment Team meets deliverable due dates and effectively fills the gaps in ELC processes, procedures, and guidance. Critical training needs must be addressed quickly, so that the BSMO personnel can begin fulfilling their new roles and responsibilities and provide the oversight required by the ELC. In addition, the IRS should ensure that the PRIME contractor provides additional focus on training project personnel in required ELC processes, so that projects produce quality deliverables that meet milestone requirements.

Detailed Objective, Scope, and Methodology

Our overall objective was to assess the Internal Revenue Service's (IRS) processes for development and implementation of the Enterprise Life Cycle (ELC) for Business Systems Modernization.

I. To evaluate the processes for developing the ELC to ensure that it is current, complete, and in a usable format and structure, we:

A. Met with IRS and the Computer Sciences Corporation (CSC)[1] officials to determine processes and procedures for developing the ELC and to ensure the ELC is complete, current, and meets the needs of its users.

B. Reviewed the ELC Process Asset Library (PAL) to determine whether detailed process descriptions and procedures have been developed.

C. Selected a random sample of 36 work products from the 180 products in the work product tables and determined whether templates and examples were documented on the ELC PAL.

D. Reviewed the ELC PAL to determine whether the Investment Decision Management, Security and Privacy, Legacy Systems Transformation, and Enterprise Architecture Supplements were prepared, finalized, and approved.

E. Met with CSC officials to determine whether the ELC specifically addressed the following elements previously reported missing by the General Accounting Office:[2]

- How work processes will be reengineered.
- How business requirements will be specified.
- How engineering solutions will be developed.
- How business cases for technology investments will be formulated and evaluated.
- How systems conforming to the architectural standards will be developed.

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[1] In December 1998, the IRS selected the CSC to serve as the Prime Systems Integration Services Contractor (PRIME) for the Business Systems Modernization Program.

[2] *Tax Systems Modernization: Blueprint Is a Good Start But Not Yet Sufficiently Complete to Build or Acquire Systems* (Reference Number GAO/AIMD/GGD-98-54, dated February 1998).

- How operational systems conforming to architectural standards will be maintained.
- How technology investments will be evaluated using performance metrics.

F. Determined whether the ELC PAL web site is properly maintained and user-friendly:

1. Interviewed an IRS system administrator to determine the following:

   - Frequency of revisions made to the ELC.
   - Number of updates actually made to the ELC PAL.
   - Revisions planned to enhance the PAL.
   - Feedback on user satisfaction.

2. Surveyed a random sample of 87 of the 275 (we received responses from 46 of the 87 employees) employees at the IRS' Systems Modernization program and project levels to determine their level of satisfaction with the ELC PAL (e.g., information available, navigation tools, tailoring guidance, etc.).

II. To evaluate processes established to deploy the ELC to the Business Systems Modernization Office (BSMO) personnel and key stakeholders, we:

A. Evaluated the plan for deploying the ELC processes to BSMO personnel and to key stakeholders of the Business Systems Modernization Program.

1. Determined whether the ELC Deployment Plan had been finalized, approved, and executed.

2. Determined whether processes and procedures had been established for effective project and delivery management. Interviewed a representative in the Process Management Division in the BSMO to determine if the following had been established:

   - Program Work Breakdown Structure.
   - Formal Communications and Transformation Plans.
   - ELC Deployment Metrics Program.
   - Milestone Readiness Review Criteria.
   - Key Checkpoints.

3. Determined whether the ELC Deployment Plan mitigated the following ELC program risks identified in the February 9, 2000, Core Business Systems Executive Steering Committee meeting minutes:

   - The ELC processes and procedures have not been institutionalized.

- The IRS Information Systems Security Program as defined in Internal Revenue Manual 2.1.20 has not been completely incorporated into the ELC.

4. Reviewed the Business Systems Modernization Organizational Change Framework, Organizational Transition Plan, dated June 30, 2000, and determined how and when ELC processes and procedures would be implemented.

B. Determined whether the roles and responsibilities for key BSMO personnel and stakeholders had been defined and mapped to the appropriate ELC processes. Obtained current copies of the BSMO Program Charter and organizational chart and determined whether these documents had been completed, finalized, and approved.

C. Determined whether the ELC Deployment Program had sufficient resources to effectively implement the ELC in accordance with the ELC Deployment Plan and task orders.

1. Evaluated current organizational chart and task orders for the ELC Deployment Program.

2. Compared the following information for the ELC Deployment Team to determine whether it had adequate staffing and funding:

Staffing Level

- Authorized Staff Pattern.
- Number of permanent positions.
- Number of contract positions.
- Number of current vacancies.

Funding Level

- Total funding estimated.
- Total funding requested.
- Total funding received to-date.

D. Determined whether ELC training strategies had been developed for program management office personnel and IRS employees and PRIME contractor personnel at the Project/Integrated Project Level (IPT). Met with an official in the PRIME Training Division at the CSC to determine the type of ELC training provided to PRIME contractor personnel and IRS project employees.

1. Evaluated the documents obtained to determine whether adequate training had been provided to IPT leaders, ELC coaches, IRS project managers, and other project level employees.

2. Determined whether specific training classes had been identified for each program management office role.

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